

1 1. A method for a user of a measurement process to cause a variation in the
2 measurement process, the measurement process comprising a sequence of
3 operations controlled by a computer program containing a variation point at
4 which control is passed to a variation function, said method comprising:
5

6 determining the variation to the measurement process;
7 providing a process modification software module comprising a user-
8 defined function for causing the variation; and
9 associating the user-defined function with the variation function,
10 wherein control is passed to the user-defined function when the variation point
11 in the computer program is reached.

12 2. A method as in claim 1, wherein the process modification software module
13 further comprises an interface servicing element that services an interface
14 realized by the measurement process.

15 3. A method as in claim 2, wherein said interface operates in accordance with
16 a predetermined protocol.

17 4. A method as in claim 3, wherein said predetermined protocol is specified at
18 a binary level.

19 5. A method as in claim 3, wherein said predetermined protocol is a Simple
20 Object Access Protocol.

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1 6. A method as in claim 3, wherein said predetermined protocol is a Common
2 Object Request Broker Architecture.

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4 7. A method as in claim 2, wherein said interface is determined by the user
5 and is passed into said measurement process.

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7 8. A method as in claim 1, wherein said process modification software
8 module is one of a Component Object Module, an Enterprise Java Bean, and
9 a Dynamically Linked Library.

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11 9. A method as in claim 1, wherein the measurement process and the
12 process modification software module are executed in a shared computer
13 memory space.

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15 10. A method as in claim 1, wherein said measurement process is executed
16 in a first memory space of a first computer and said process modification
17 software module is executed in a second memory space which is distinct from
18 the first memory space.

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20 11. A method as in claim 10, wherein the second memory space is located
21 within a second computer.

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23 12. A method as in claim 11, wherein the second computer is remote from
24 the first computer.

1 13. A method as in claim 12, wherein the first computer and the second
2 computer communicate via a network.

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4 14. A method as in claim 1, wherein said variation comprises modification of
5 data.

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7 15. A method as in claim 1, wherein said variation comprises modification of
8 one or more numerical parameters of the measurement process.

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10 16. A method as in claim 1, wherein said variation comprises modification of
11 one or more control parameters of the measurement process, wherein one or
12 more alternatives within the measurement process may be selected.

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14 17. A method as in claim 1, wherein said measurement process is applied to
15 a device under test and said variation comprises alteration of a configuration
16 of the device under test.

17
18 18. A method as in claim 1, wherein said measurement process is applied to
19 a device under test and said variation comprises causing input signals to be
20 supplied to the device under test.

21
22 19. A method as in claim 1, wherein said computer program contains a
23 plurality of variation points and said process modification software module
24 comprises a plurality of user-defined functions and wherein each of the

1 plurality of variation points is associated with one of the plurality of user-
2 defined functions.

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4 20. A method as in claim 1, wherein said computer program contains a
5 plurality of variation points and a plurality of process modification software
6 modules are provided, each of the plurality of process modification software
7 modules comprising at least one user-defined function and wherein each of
8 the plurality of variation points is associated with one of the at least one user-
9 defined functions.

10

11 21. A computer readable medium containing instructions which, when
12 executed on a computer, control a measurement process, said instructions
13 comprising:

14 a plurality of instructions operable to control the measurement process;
15 and

16 a function call instruction operable to pass control to a variation
17 function;

18 wherein the variation function operates to modify the measurement process.

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20 22. A computer readable medium as in claim 21, wherein the function call
21 instruction is operable to pass parameters to the variation function.

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23 23. A computer readable medium as in claim 22, wherein the parameters
24 comprise measurement data.

1 24. A computer readable medium as in claim 21, wherein the function call
2 instruction is operable to receive parameters from the variation function.

3
4 25. A computer readable medium as in claim 26, wherein the parameters
5 comprise control parameters, operable to select between a plurality of
6 alternative instructions controlling the measurement process.

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8 26. A computer readable medium as in claim 24, wherein the parameters
9 comprise numerical parameters, operable to modify the measurement
10 process.

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12 27. A computer readable medium as in claim 24, wherein said measurement
13 process is applied to a device under test and wherein the parameters
14 comprise control codes, operable to cause signals to be supplied to the
15 device under test.

16
17 28. A computer readable medium as in claim 24, wherein said measurement
18 process is applied to a device under test and wherein the parameters
19 comprise control codes, operable to alter the configuration of the device under
20 test.

21
22 29. A computer readable medium as in claim 21, wherein the function call
23 instruction invokes an interface.

1 30. A computer readable medium as in claim 21, wherein the variation
2 function is provided by a user of the measurement process, thereby allowing
3 the user to modify the measurement process.

4
5 31. A computer readable medium as in claim 30, wherein the variation
6 function provided by the user of the measurement is accessed via an
7 interface.

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9 32. A computer readable medium as in claim 31, wherein said interface
10 operates according to a predetermined protocol.

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12 33. A computer readable medium as in claim 32, wherein said predetermined
13 protocol is specified at a binary level.

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15 34. A computer readable medium as in claim 33, wherein said predetermined
16 protocol is a Simple Object Access Protocol.

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18 35. A computer readable medium as in claim 33, wherein said predetermined
19 protocol is a Common Object Request Broker Architecture.

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21 36. A computer readable medium as in claim 31, wherein said interface
22 determined by the user and wherein said instructions further comprise
23 instructions to identify the interface.

1 37. A computer readable medium as in claim 21, wherein said variation
2 function is implemented as one of a Component Object Module, an Enterprise
3 Java Bean, and a Dynamically Linked Library.

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5 38. A computer readable medium as in claim 21, further comprising a plurality
6 of function call instructions passing control to a plurality of variation functions.

7
8 39. A computer readable medium as in claim 21, wherein said function call
9 instruction is placed within said plurality of instructions operable to control the
10 measurement process at a variation point where a designer of the instruction
11 anticipates a user may want to interact with or modify the measurement
12 process.
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